Less easy is it to explain a more curious mistake which occurs in both Latin MSS. of the *Almagest* of Gerard of Cremona at the British Museum, and with precisely the same stars as the above error in the Arabic *Almagest*. The latitudes of 34 stars in the Catalogue are given as 300 and odd degrees instead of 60 and odd * degrees. Here the translator must have confounded the س, Seen, =60, with the ش, Sheen, =300, and given the numerical value of the latter letter to the former.

1885, *January* 7.

---

### Note on the Periodic Time of α Centauri.
### By A. M. W. Downing, M.A.

In the *Monthly Notices* for November last there is an interesting paper by Mr. Powell on the periodic time of α *Centauri*, in which he contends that the period of this celebrated binary—for our knowledge of the orbital motion of which we are so much indebted to his own observations—cannot, in all probability, be less than 86 or 87 years. Into the reasons which have induced Mr. Powell to come to this conclusion I do not propose to enter on the present occasion, and will content myself with saying that it appears to me that the only test of an orbit is to compare it with *observations*; and that, as far as I can judge, a period of about 76 years will stand this test as well as can be reasonably expected, taking into account the insufficient means of observation employed for the earlier measures, and the difficulty of making accurate observations, on account of the proximity of the stars, in some of the later ones. In order to show this agreement in some extreme cases, I have compared the position-angles computed from the orbit, published in the *Monthly Notices* for March 1884, with the individual measures made before Herschel's time, and also with a set of measures made last year by Mr. Tebbutt (*Observatory*, vol. vii. p. 296) subsequently to the date of publication of the elements to which I refer.

| Epoch. | Observer. | Observed Pos. Angle. | Observed − Computed. |
|---|---|---|---|
| 1752·2 | Lacaille | 218·7 | +4·19 |
| 1822·0 | Fallows | 209·6 | −1·00 |
| 1824·0 | Brisbane | 215·4 | +3·77 |
| 1826·01 | Dunlop | 213·2 | +0·52 |
| 1830·01 | Johnson | 215·0 | +0·10 |
| 1831·00 | Taylor | 215·9 | +0·41 |
| 1832·16 | ,, | 216·4 | ÷0·18 |
| 1884·533 | Tebbutt | 199·80 | −0·46 |

* In the Sloane MS. the impossibility of such latitudes seems to have occurred to the scribe, who has endeavoured to correct them by erasing the cypher, and so making them 30 and odd degrees, but in no case has the correct latitude been given.

I may remark that there is no use in forcing an agreement with Lacaille's position-angle (at all events within 5° or so), as I find that a change of 3″ in the difference of Declination of the components changes the position-angle more than 5°; and considering the small number of observations on which Lacaille's places depend, the quantity mentioned above is probably well within the limits of error.   Brisbane's position-angle appears to be erroneous.   The agreement in the other cases is close, and I see no evidence that a period differing much from 76·222 years is required to satisfy the observations.

---

*Note on Prof. Pritchard's Comparison of the Light Transmitted by Refracting and Reflecting Telescopes.*   By W. S. Franks.

There are a few points in Prof. Pritchard's remarks, at the last meeting of the Society, that I should like to see cleared up. At the outset he seems to infer that nothing has been done in the way of careful comparison, between reflectors and refractors, since the time of Dr. Robinson, on whose results he depends largely.

Possibly no photometric comparison had been previously attempted; but, certainly, careful eye-estimates have been made by various observers of the relative light-ratio of the two classes of telescopes, mounted side by side, and directed upon identical objects, the results being published in some of the scientific journals.   A cursory inspection of the last twenty volumes of the *English Mechanic* will afford ample evidence in support of this statement.

Dr. Robinson's conditions may be very well so far as they go, but they do not go far enough.   Two very important points are ignored—the relative foci of the telescopes, and their magnifying powers.   Now I note that Prof. Pritchard stated, in answer to Mr. Rand Capron (*Observatory* report) that the focal lengths of the O.G. and mirrors were the same.   This, surely, is a slip, for, according to the best of my knowledge, the particulars are as follows:—

|   |                   | Aperture.              | Focus.          |
|---|-------------------|------------------------|-----------------|
| a | Grubb refractor   | $12\frac{1}{5}$ inches. | 15 feet.        |
| b | De la Rue reflector | 13    „               | 10   „          |
| c | With reflector    | 13    „                | 9   „   (?)     |

(The last I am not certain of, but have given the usual focus of Mr. With's 13-in. specula.)

Therefore, the angles of convergence between 15 feet and 9 or 10 feet focus will be widely different.   From this it follows that to get equivalent magnifying powers we must use very different eyepieces; and the eyepiece on the refractor would be